

REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed June 9, 2008. Through this response, claims 1, 8, 26, and 27 have been amended. Reconsideration and allowance of the application and pending claims 1-50 are respectfully requested.

I. Claim Rejections - 35 U.S.C. § 102(e)

A. Statement of the Rejection

Claims 1-4, 6, 9, 10, 19, 22, 26-29, 31, 34, 35, 44 and 47 have been rejected under 35 U.S.C. § 102(e) as allegedly anticipated by *Gotoh et al.* ("Gotoh," U.S. Pub. No. 2001/0043800). Applicants respectfully traverse this rejection to the extent not rendered moot by amendment.

B. Discussion of the Rejection

It is axiomatic that "[a]nticipation requires the disclosure in a single prior art reference of each element of the claim under consideration." *W. L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983). Therefore, every claimed feature of the claimed invention must be represented in the applied reference to constitute a proper rejection under 35 U.S.C. § 102(e).

In the present case, not every claimed feature is represented in the *Gotoh* reference. Applicants discuss the *Gotoh* reference and Applicants' claims in the following.

Independent Claim 1:

Claim 1 recites (with emphasis added):

1. A media content recording system in a subscriber network television system, comprising:

a memory for storing logic;

a storage device comprising a buffer space for continuously buffering media content instances; and

a processor configured with the logic to represent each of the media content instances in the buffer space as a respective management file stored in the memory, the management file comprising a data structure that includes information identifying a corresponding media content instance of the media content instances.

Applicants respectfully submit that the rejection has been rendered moot. Further, Applicants respectfully submit that claim 1 is allowable over *Gotoh*. Applicants have incorporated some features of claim 2 into claim 1, and hence address the rejection as applied to claims 1 and 2. As to the rejection of claim 1, Applicants respectfully submit that the non-final Office Action improperly equates two separately and distinctly claimed features to a single element in *Gotoh* (805 – memory, 805 storage device). Applicants respectfully believe this interpretation to be at odds with Applicants' disclosed embodiments and further at odds with the obvious intent in claim 1 to treat these features as separate components.

In addition, the non-final Office Action (page 2, with regard to claim 2) equates the above-emphasized claim features to 805 of Figure 9, "system processing memory," and refers to paragraphs [0055, 0062] of *Gotoh*, which are reproduced below as follows:

[0055] According to another aspect of the present invention, there is provided, a method for recording a real-time file containing real-time data on an information recording medium in such a manner that the real-time data is continuously reproducible by a playback reference model, the real-time data including at least one of video data and audio data, wherein the playback reference model includes: a pickup for reading the real-time data from the information recording medium; a buffer memory for temporarily storing the real-time data read by the pickup; and a decoder module for reading the real-time data from the buffer memory for processing, wherein the information recording medium includes a volume space for at least recording in sectors a file including data and file

management information for managing the file, the real-time data is recorded in at least one real-time extent each of which is allocated in logically contiguous sectors within the volume space, wherein the method includes the steps of: searching for at least two areas satisfying a real-time reproduction condition from among a plurality of logically contiguous unused areas within the volume space, each of the at least two areas being designated as a pre-allocated area, an $(i+1)^{\text{th}}$ pre-allocated area among the at least two areas satisfying the real-time reproduction condition being defined as: $T(i) \leq (B(i-1) + D(i)) / V_{\text{out}}$, wherein: $T(i)$ represents a time required for the pickup to access from an end of an i^{th} pre-allocated area among the at least two pre-allocated areas to a beginning of the $(i+1)^{\text{th}}$ pre-allocated area; $B(i)$ represents an amount of data having been stored in the buffer memory when the pickup accesses from the end of the i^{th} pre-allocated area to the beginning of the $(i+1)^{\text{th}}$ pre-allocated area, such that $B(i) = B(i-1) + D(i) - V_{\text{out}} \times T(i)$, assuming that $B(0) = 0$, $D(i)$ represents an increase in the amount of data having been stored in the buffer memory responsive to the pickup reading the data from the i^{th} pre-allocated area, such that $D(i) = (V_{\text{in}} - V_{\text{out}}) \times S(i) / V_{\text{in}}$, wherein $D(i)$ is corrected at least to a value equal to or smaller than $M - B(i-1)$ when $D(i) > M - B(i-1)$, where M represents a size of the buffer memory; V_{out} represents a data transfer rate when the data is transferred from the buffer memory to the decoder module; V_{in} represents a data transfer rate when the data is read from the pre-allocated area by the pickup and transferred to the buffer memory; and $S(i)$ represents a data size of the i^{th} pre-allocated area; recording the real-time data in the pre-allocated area; designating a set of logically contiguous sectors in which real-time data is recorded as a real-time extent; and recording the file management information for managing the real-time data as the real-time file.

[0062] Alternatively, there is provided a method for recording a real-time file containing real-time data on an information recording medium in such a manner that the real-time data is continuously reproducible by a playback reference model, the real-time data including at least one of video data and audio data, wherein the playback reference model includes: a pickup for reading the real-time data from the information recording medium; a buffer memory for temporarily storing the real-time data read by the pickup; and a decoder module for reading the real-time data from the buffer memory for processing, wherein the information recording medium includes a volume space for at least recording in sectors a file including data and file management information for managing the file, the real-time data is recorded in at least one real-time extent each of which is allocated in logically contiguous sectors within the volume space, wherein the method includes the steps of: calculating whether or not each of the at least one real-time extent will cause an overflow in an amount of data stored in the buffer memory if the real-time extent is reproduced by the playback reference model; when it is calculated that the real-time extent will cause an overflow, correcting the amount of data stored in the buffer memory to equal to or smaller than the size of the buffer memory; calculating whether or not an underflow will occur in the amount of data stored in the buffer memory if the playback reference model accesses from the real-time extent to a newly-allocated

pre-allocated area; when it is calculated that an underflow will occur, searching for a real-time extent which will not cause an underflow, on accessing from the real-time extent to the pre-allocated area; recording in the newly-allocated pre-allocated area the real-time data already recorded in the real-time extent which will cause an underflow; recording real-time data to be appended in the newly-allocated pre-allocated area; designating a set of logically contiguous sectors in which real-time data is recorded as a real-time extent; and recording the file management information.

Applicants respectfully submit that the above-emphasized features are not disclosed or suggested in the above-recited sections of *Gotoh*. Indeed, Applicants respectfully solicit assistance from the Office in pointing out where in these recited sections the above-emphasized features are found. Assuming *arguendo* “file management information” is to be equated to the claimed **management file**, it is respectfully noted that the file management information of *Gotoh* not only fails to **represent each of the media content instances in the buffer space as a respective management file**, but also fails to be **stored in the memory**. For at least these reasons, Applicants respectfully request that the rejection be withdrawn.

Further, Applicants have incorporated features from claim 8 (**data structure**) in claim 1. It is noted that claim 8 was rejected under 103 based on *Gotoh* in view of *Ellis*. *Gotoh* does not disclose, teach, or suggest such features. As to *Ellis*, though Applicants respectfully submit that *Ellis* also fails to disclose the above-emphasized features (Applicants are unclear how *Ellis* allegedly shows a **management file** stored in **memory** that comprises a **data structure** for each stored buffer content instance), Applicants only summarily address *Ellis* in view of the fact that *Ellis* possesses an effective filing date for the claimed features that is later than Applicants effective filing date. Though Applicants note that various provisional applications act as an alleged basis for priority in *Ellis*, the citations in the Office Action are not derived from the provisionals, but rather, from the later filed patent publication, which Applicants believe renders the rejection improper. To assist the

Office, Applicants have attempted to pull-up from PAIR some of the provisionals, but experienced difficulties in access and further note that the extensive documentation of the provisionals coupled with the access difficulties hampers efforts in assisting the Office to determine whether there exists a basis for priority and whether the features claimed are indeed disclosed in the provisionals. Accordingly, Applicants respectfully request that the next (non-final) Office Action cite the applicable sections from the provisionals of *Ellis* should the rejection be maintained, or alternatively, Applicants request that the rejection be withdrawn.

Because independent claim 1 is allowable over *Gotoh*, dependent claims 2-4, 6, 9, 10, 19 and 22 are allowable as a matter of law for at least the reason that the dependent claims 2-4, 6, 9, 10, 19 and 22 contain all elements of their respective base claim. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Independent Claim 26:

Claim 26 recites (with emphasis added):

26. A media content recording method in a subscriber network television system, comprising the steps of:

buffering media content instances into a buffer space; and
***representing each of the buffered media content instances as
a management file in a memory separate from the buffer space.***

The non-final Office Action alleges (page 4) that the rejection to claim 26 uses the same rationale as claim 1. Applicants respectfully submit that the rejection has been rendered moot. Further, Applicants respectfully submit that claim 26 is allowable over *Gotoh*. For similar reasons presented in association with claim 1, Applicants respectfully submit that the *Gotoh* does not disclose, teach, or suggest the above-emphasized claim features.

In addition, using the rationale of the rejection for claim 1, it is respectfully noted that the non-final Office Action (page 2, with regard to claim 2) equates the ***management file***

features to 805 of Figure 9, "system processing memory," and refers to paragraphs [0055, 0062] of *Gotoh*, which are reproduced below as follows:

[0055] According to another aspect of the present invention, there is provided, a method for recording a real-time file containing real-time data on an information recording medium in such a manner that the real-time data is continuously reproducible by a playback reference model, the real-time data including at least one of video data and audio data, wherein the playback reference model includes: a pickup for reading the real-time data from the information recording medium; a buffer memory for temporarily storing the real-time data read by the pickup; and a decoder module for reading the real-time data from the buffer memory for processing, wherein the information recording medium includes a volume space for at least recording in sectors a file including data and file management information for managing the file, the real-time data is recorded in at least one real-time extent each of which is allocated in logically contiguous sectors within the volume space, wherein the method includes the steps of: searching for at least two areas satisfying a real-time reproduction condition from among a plurality of logically contiguous unused areas within the volume space, each of the at least two areas being designated as a pre-allocated area, an (i+).sup.th pre-allocated area among the at least two areas satisfying the real-time reproduction condition being defined as: $T(i) \cdot \text{ltoreq.}(B(i-1)+D(i))/V_{\text{out}}$, wherein: $T(i)$ represents a time required for the pickup to access from an end of an i.sup.th pre-allocated area among the at least two pre-allocated areas to a beginning of the (i+1).sup.th pre-allocated area; $B(i)$ represents an amount of data having been stored in the buffer memory when the pickup accesses from the end of the i.sup.th pre-allocated area to the beginning of the (i+1).sup.th pre-allocated area, such that $B(i)=B(i-1)+D(i)-V_{\text{out}} \cdot T(i)$, assuming that $B(0)=0$, $D(i)$ represents an increase in the amount of data having been stored in the buffer memory responsive to the pickup reading the data from the i.sup.th pre-allocated area, such that $D(i)=(V_{\text{in}}-V_{\text{out}}) \cdot \text{times.} S(i)/V_{\text{in}}$, wherein $D(i)$ is corrected at least to a value equal to or smaller than $M-B(i-1)$ when $D(i)>M-B(i-1)$, where M represents a size of the buffer memory; V_{out} represents a data transfer rate when the data is transferred from the buffer memory to the decoder module; V_{in} represents a data transfer rate when the data is read from the pre-allocated area by the pickup and transferred to the buffer memory; and $S(i)$ represents a data size of the i.sup.th pre-allocated area; recording the real-time data in the pre-allocated area; designating a set of logically contiguous sectors in which real-time data is recorded as a real-time extent; and recording the file management information for managing the real-time data as the real-time file.

[0062] Alternatively, there is provided a method for recording a real-time file containing real-time data on an information recording medium in such a manner that the real-time data is continuously reproducible by a playback reference model, the real-time data including at least one of video data and audio data, wherein the playback reference model includes: a pickup for reading the real-time data from the information recording medium; a buffer memory for temporarily storing the real-time

data read by the pickup; and a decoder module for reading the real-time data from the buffer memory for processing, wherein the information recording medium includes a volume space for at least recording in sectors a file including data and file management information for managing the file, the real-time data is recorded in at least one real-time extent each of which is allocated in logically contiguous sectors within the volume space, wherein the method includes the steps of: calculating whether or not each of the at least one real-time extent will cause an overflow in an amount of data stored in the buffer memory if the real-time extent is reproduced by the playback reference model; when it is calculated that the real-time extent will cause an overflow, correcting the amount of data stored in the buffer memory to equal to or smaller than the size of the buffer memory; calculating whether or not an underflow will occur in the amount of data stored in the buffer memory if the playback reference model accesses from the real-time extent to a newly-allocated pre-allocated area; when it is calculated that an underflow will occur, searching for a real-time extent which will not cause an underflow, on accessing from the real-time extent to the pre-allocated area; recording in the newly-allocated pre-allocated area the real-time data already recorded in the real-time extent which will cause an underflow; recording real-time data to be appended in the newly-allocated pre-allocated area; designating a set of logically contiguous sectors in which real-time data is recorded as a real-time extent; and recording the file management information.

Applicants respectfully submit that the above-emphasized features are not disclosed or suggested in the above-recited sections of *Gotoh*. Indeed, Applicants respectfully solicit assistance from the Office in pointing out where in these recited sections the above-emphasized features are allegedly found. Assuming *arguendo* “file management information” is to be equated to the claimed **management file**, it is respectfully noted that the file management information of *Gotoh* not only fails to **represent each of the media content instances in the buffer space as a respective management file**, but also fails to be **stored in the memory**. For at least these reasons, Applicants respectfully request that the rejection be withdrawn.

Because independent claim 26 is allowable over *Gotoh*, dependent claims 27-29, 31, 34, 35, 44 and 47 are allowable as a matter of law.

Due to the shortcomings of the *Gotoh* reference described in the foregoing, Applicants respectfully assert that *Gotoh* does not anticipate Applicants' claims. Therefore, Applicants respectfully request that the rejection of these claims be withdrawn.

II. Claim Rejections - 35 U.S.C. § 103(a)

A. Statement of the Rejection

Claims 5, 7, 8, 11-18, 20, 21, 23-25, 30, 32, 33, 36-43, 45, 46 and 48-50 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Gotoh* in view of *Ellis et al.* ("*Ellis*," U.S. Pub. No. 2002/0174430). Applicants respectfully traverse this rejection.

B. Discussion of the Rejection

The M.P.E.P. § 2100-116 states:

Office policy is to follow *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), in the consideration and determination of obviousness under 35 U.S.C. 103. . . the four factual inquiries enunciated therein as a background for determining obviousness are as follows:

- (A) Determining the scope and contents of the prior art;
- (B) Ascertaining the differences between the prior art and the claims in issue;
- (C) Resolving the level of ordinary skill in the pertinent art; and
- (D) Evaluating evidence of secondary considerations.

In the present case, it is respectfully submitted that a *prima facie* case for obviousness is not established using the art of record.

Dependent Claims 5, 7, 8, 11-18, 20, 21, 23, 24, 30, 32, 33, 36-43, 45, 46, and 48-49

As set forth in association with claims 1 and 26 above, Applicants respectfully submit that claims 1 and 26 are allowable over *Gotoh*. In addition, Applicants respectfully submit that *Ellis* neither discloses, teaches, nor suggests the emphasized claim features on claims 1 and 26 and further does not constitute an anticipatory reference as set forth above. For at least the reason that claims 5, 7, 8, 11-18, 20, 21, 23, 24, 30, 32, 33, 36-43, 45, 46, and 48-49 depend from respective allowable claims 1 and 26, Applicants respectfully submit that claims 5, 7, 8, 11-18, 20, 21, 23, 24, 30, 32, 33, 36-43, 45, 46, and 48-49 are allowable as a matter of law. Accordingly, Applicants respectfully request that the rejection be withdrawn.

Independent Claim 25:

Claim 25 recites (with emphasis added):

25. A media content recording system in a subscriber network television system, comprising:

- a memory for storing logic;
- a storage device comprising a buffer space for continuously buffering media content instances; and
- a processor configured with the logic to buffer media content instances into the buffer space, wherein the processor is further configured with the logic to **represent the media content instances in the buffer space as a linked list of management files in the memory**, wherein the logic is further configured to track the duration of the buffered media content instance, wherein the duration of the media content instance corresponds to hard disk space, wherein the management files comprise the locations of data for said files and locations to a previously created management file and to a subsequently created management file, **wherein the processor is further configured with the logic to configure each of the management files as a data structure that includes media content instance guide data, a buffering start time, an active playback location within the media content instance in the buffer space, a status flag, and a media content instance file name**, wherein the processor is further configured with the logic to use and

store the scheduled stop time of each of the media content instances from the media content instance guide data to determine when to close the management file for an ended media content instance and open a new management file for a next media content instance to be downloaded to the buffer space, wherein the processor is further configured with the logic to receive media content information from a remote server, wherein the media content information comprises a scheduled media content instance start time and a scheduled media content instance end time, wherein the processor is further configured with the logic to track when the buffering of the media content instance starts, wherein the processor is further configured with the logic to determine the media content instance duration by subtracting the media content instance buffering start time from the scheduled media content instance end time, ***wherein the processor is further configured with the logic to organize a plurality of management files as a linked list of the management files comprising the locations of data for said files and locations to a previously created management file and to a subsequently created management file***, wherein the processor is further configured with the logic to use the receipt time of a media content instance into the buffer space by using the start time as indicated by an internal clock, wherein the processor is further configured with the logic to configure the media content instances as media content instance files, wherein the processor is further configured with the logic to identify the media content instance files by file names, wherein the processor is further configured with the logic to generate the media content instance file names using the media content instance guide data, wherein each of the media content instance file names include channel number, media content instance title, and the source of the media content instance, wherein the processor is further configured with the logic to access the media content instances by the media content instance file names, wherein the processor is further configured with the logic to buffer analog broadcast media content instances, received at a communications interface, as digitally compressed media content instances, wherein the processor is further configured with the logic to buffer an analog signal received at a connector from a consumer electronics device, as a digitally compressed media content instance, wherein the processor is further configured with the logic to buffer digital broadcast media content instances, received at a communications interface, as digitally compressed media content instances, wherein the processor is further configured with the logic to buffer digital media-on-demand media content instances, received at a communications

interface from a remote server, as digitally compressed media content instances, wherein the processor is further configured with the logic to buffer digital media content instances, received at a digital communications port from a local network, as digitally compressed media content instances, wherein the processor is further configured with the logic to buffer digital media content instances, received at a digital communications port from a local device, as digitally compressed media content instances, **wherein the processor is further configured with the logic to maintain the status flag in the management file wherein the status flag is configured as temporary for a buffered media content instance that is not designated for permanent recording, wherein the processor is further configured with the logic to configure the status flag of the management file for a buffered media content instance as permanent when the user requests that said media content instance be permanently recorded, wherein the processor is further configured with the logic to cause the permanently recorded media content instance to have a permanent designation in a file allocation table in response to having the status flag of the corresponding management file configured as permanent**, such that the buffer space storing the permanently recorded media content instance becomes designated as non-buffer space.

For similar reasons presented above in association with claim 1, Applicants respectfully submit that *Gotoh* in view of *Ellis* fails to disclose, teach, or suggest at least the above-emphasized features. For instance, to the extent the non-final Office Action relies on *Gotoh* for the linked-list features (e.g., page 13, non-final Office Action, with reference to Figures 7A, 14D, 15, and 17), Applicants respectfully note that, even assuming *arguendo* the structures in those referenced figures constitute linked-lists, they are not for **management files** stored in **memory** as claimed, but rather appear to constitute structures stored in the optical disk drive of *Gotoh*. Further, there is no evidence of **status flags** in **management files** as claimed in either *Gotoh* or *Ellis*, though *Ellis* appears *arguendo* to disclose an icon pertaining to status that be displayed (which is not the same feature as claimed).

For at least these reasons, Applicants respectfully request that the rejection be withdrawn.

Independent Claim 50:

Claim 50 recites (with emphasis added):

50. A media content recording method in a subscriber network television system, comprising the steps of:

***buffering media content instances into a buffer space;
representing the media content instances in the buffer space
as a linked list of management files in the memory;***

tracking the duration of the buffered media content instance, wherein the duration of the media content instance corresponds to hard disk space, wherein the management files comprise the locations of data for said files and locations to a previously created management file and to a subsequently created management file;

configuring each of the management files as a data structure that includes media content instance guide data, a buffering start time, an active playback location within the media content instance in the buffer space, a status flag, and a media content instance file name;

using and store the scheduled stop time of each of the media content instances from the media content instance guide data to determine when to close the management file for an ended media content instance and open a new management file for a next media content instance to be downloaded to the buffer space;

receiving media content information from a remote server, wherein the media content information comprises a scheduled media content instance start time and a scheduled media content instance end time;

tracking when the buffering of the media content instance starts;

determining the media content instance duration by subtracting the media content instance buffering start time from the scheduled media content instance end time;

organizing a plurality of management files as a linked list of the management files comprising the locations of data for said files and locations to a previously created management file and to a subsequently created management file;

using the receipt time of a media content instance into the buffer space by using the start time as indicated by an internal clock;

configuring the media content instances as media content instance files;

identifying the media content instance files by file names;

generating the media content instance file names using the media content instance guide data, wherein each of the media

content instance file names include channel number, media content instance title, and the source of the media content instance;

accessing the media content instances by the media content instance file names;

buffering analog broadcast media content instances, received at a communications interface, as digitally compressed media content instances;

buffering an analog signal received at a connector from a consumer electronics device, as a digitally compressed media content instance;

buffering digital broadcast media content instances, received at a communications interface, as digitally compressed media content instances;

buffering digital media-on-demand media content instances, received at a communications interface from a remote server, as digitally compressed media content instances;

buffering digital media content instances, received at a digital communications port from a local network, as digitally compressed media content instances;

buffering digital media content instances, received at a digital communications port from a local device, as digitally compressed media content instances;

maintaining the status flag in the management file wherein the status flag is configured as temporary for a buffered media content instance that is not designated for permanent recording;

configuring the status flag of the management file for a buffered media content instance as permanent when the user requests that said media content instance be permanently recorded; and

causing the permanently recorded media content instance to have a permanent designation in a file allocation table in response to having the status flag of the corresponding management file configured as permanent, such that the buffer space storing the permanently recorded media content instance becomes designated as non-buffer space.

For similar reasons presented above in association with claim 1, Applicants respectfully submit that *Gotoh* in view of *Ellis* fails to disclose, teach, or suggest at least the above-emphasized features. For instance, to the extent the non-final Office Action relies on *Gotoh* for the linked-list features (e.g., page 13 and 20, non-final Office Action, with reference to Figures 7A, 14D, 15, and 17), Applicants respectfully note that, even assuming *arguendo* the structure in those

referenced figures constitute linked-lists, they are not for **management files** stored in **memory** as claimed, but rather appear to constitute structures stored in the optical disk drive of *Gotoh*. Further, there is no evidence of **status flags** in **management files** as claimed in either *Gotoh* or *Ellis*, though *Ellis* appears *arguendo* to disclose an icon pertaining to status that be displayed (which is not the same feature as claimed). For at least these reasons, Applicants respectfully request that the rejection be withdrawn.

In summary, it is Applicants' position that a *prima facie* for obviousness has not been made against Applicants' claims. Therefore, it is respectfully submitted that each of these claims is patentable over *Gotoh* and *Ellis*, and that the rejection of these claims should be withdrawn.

III. IDS

Applicants have included with this response an IDS that cites the latest office actions and/or issued patents for cases cited in a previous IDS (June 12, 2002) for the present case or referenced in the present application, which the Examiner may wish to review.

CONCLUSION

Applicants respectfully submit that Applicants' pending claims are in condition for allowance. Any other statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Furthermore, any and all findings of well-known art and official notice, and similarly interpreted statements, should not be considered well known since the Office Action does not include specific factual findings predicated on sound technical and scientific reasoning to support such conclusions. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,

/dr/

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